TOP 100

Digital SAT Practice Questions

NORTHSIDE TUTORING

The Top 100 Digital SAT Prep Questions

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WELCOME - all of you who are studying and preparing rigorously for the Digital SAT!

You are in the right place!

In high school, I prepared for the SAT just as you are doing now. I know what you are going through. When I think back to that time, I know I was overwhelmingly intimidated by the SAT - and the college admissions process. I have written this Guide with especially you in mind!

There is no reason for you to worry about this test! Just like in school, this is a test that when you prepare for it, your score does improve! Isn't that comforting to know from the outset?

Just by using this Guide - and my other online and offline resources - you are taking important steps to enhance your test-taking skills and your performance on test day!

Having operated a Professional Tutoring and standardized test preparation service for more than 10 years, Northside Tutoring, I am very familiar with the SAT. Not only did I take the SAT to obtain admission to Stanford many years ago, but also I have assisted thousands of students across many years in their quests for gaining admission to their target colleges. Tutoring has helped me develop a keen sense of empathy for students like you who are enduring the admissions test-taking process. It is a brutal and competitive process - I don't have to tell YOU that. At the same time, there are people along the way - tutors, mentors, friends, and experienced guides like me - who stand at the ready to help you.

If there is one bit of advice I can give you, it is:

DON'T LET YOUR NERVES DICTATE YOUR PERFORMANCE!!

You are indeed quite capable, and you CAN master the material found on the SAT and in this Guide. You should not worry -

If there is one thing I can tell you, it is:

ALLOW YOUR CONFIDENCE IN YOURSELF TO DRIVE YOUR PERFORMANCE HIGHER!!

Being timid and fearful will only result in a lower score.

If there is one thing I can tell you to remember on test day, it is:

RELAX AND GO!!

In other words, young students, you have to BELIEVE IN YOURSELVES!!

Try everything else, and then come back to that same old adage: BELIEVE IN YOURSELF!!

Sometimes the answer to your problem is right before you, and in this case it is right WITHIN you. You will be challenged and tested across the whole of your life. You may or may not quite believe it - and, indeed, you should not accept it - when you fail. But sometimes in life you will get knocked down.

How are you going to respond?

Taking the SAT is great life-training because certainly no one gets a perfect score every time. You have to rise to the occasion - each and every time. You have to summon the drive, the determination, the grit, and the resilience to keep trying, and you have to summon the confidence and belief in yourself to not only carry on but also to elevate your performance and achieve your goals.

YOU CAN DO THIS!!

YOU CAN LEARN THIS GUIDE AND YOU CAN MASTER THE SAT!!

So now, let me tell you a bit about this Guide.

This Guide contains a complete list of the Top 100 Digital SAT practice questions. Together with my team, I have hand-picked them.

Sourced directly from official SAT practice tests and Khan academy SAT prep materials, these questions cover every skill / knowledge point and type of question you will encounter. If you are wondering how to start preparing for the digital SAT, look no further than this Guide for the most realistic and comprehensive practice questions that will help you ace the dSAT!

It is important to note that the new Digital SAT is a computer adaptive test. This means that the difficulty of the test will be tailored to each individual test taker. Each section — Reading / Writing and Math — will feature two equal length modules. Questions in the first module will be the same for each student and will in difficulty range from easy to hard. The difficulty of the second module will be determined by performance on the first module: students who answer more difficult questions correctly will see harder questions on the second module, and vice versa.

Don't worry about the second module in any instance! The College Board tells us students may not even notice a difference in difficulty at all. It will be a subtle difference at most from the first module to the second. But still - we must prepare for it and expect it to be a challenge.

The following practice questions will be the most helpful for your studying because they are realistic, comprehensive, and difficult. All questions come directly from the College Board, meaning that they closely match the questions you will see on the real test. They are comprehensive, covering every single skill tested on the new SAT and every question format you might encounter. And finally, all of these questions are of a moderate to high difficulty level. This means that if you can answer most of these practice questions correctly, you are well prepared for the level of difficulty you may encounter in both modules of the test!

Because every question type and skill is covered, this Guide provides a comprehensive but targeted review of the most important skills you will need. This may be especially helpful for last-minute test preparations. For further assistance answering these questions or more exhaustive answer explanations, you are welcome to get in touch with the effective and wonderful team at Northside Tutoring.

An answer key is included at the end, which also lists the domain and specific skill assessed by each question. Please take note of which domains and skills you have a harder or easier time with, as this can be a helpful way to guide your studying efforts.

Reading/ Writing

Reading/Writing

Unlike the paper SAT, Reading and Writing skills on the digital test will be measured in the same section. The Reading/Writing section will contain two equal length modules, with questions grouped together by skill and organized in order of increasing difficulty. For the purposes of studying, the following practice questions are separated into Reading and Writing categories.

Reading

First, we will examine the Reading section. Although the same core Reading skills are being measured, Reading questions will be slightly different on the new SAT. The main difference is that rather than reading long passages and responding to multiple questions per passage, the digital SAT will feature shorter passages with just one related question. Students should be prepared to read many short texts, featuring different topics and themes, within the given time limit.

There are two domains within digital SAT Reading: Information and Ideas and Craft and Structure. Each domain is further broken down into specific subcategories (skills). The following practice questions are organized by domain, and cover all the specific skills that will appear in each one.

Reading domain 1: Information and Ideas

Our first domain of questions asks students to use, locate, interpret, and evaluate information from various texts and infographics. Information and Ideas questions can take three different forms: Central Ideas and Details, Command of Evidence, and Inferences. You will be required to:
-   Identify the main idea of a text
-   Use the text to answer a specific question
-   Select the piece of evidence that most strongly supports a presented claim
-   Use information gathered from tables or graphs to complete a sentence
-   Use inference skills to determine which choice most logically completes the text

This domain accounts for approximately 26% (12-14 questions) of the Reading/Writing section.

First, we will look at Central Ideas and Details (questions 1, 2 and 3). As these practice questions show, you will have to read a short passage, and then **identify the main idea of the tex**t or to

answer a specific question **based on the text**. To be successful in answering these questions, make sure you understand whether the question is asking you about the main idea or about a specific piece of information. If it is a main idea question, try reading the passage closely and creating a brief summary in your own words. Your summary should help you predict the overarching theme, and should always relate to the focus of the passage. If the question is asking you about a specific detail, make sure you revisit the right part of the text using key words or phrases indicated in the question.

The following three practice questions cover the different kinds of texts you may be asked to read when answering these questions:

1.Paleontologists have found a remarkable fossil of a dinosaur that had feathers on its arms and legs, but not on its tail or body. By comparing the fossil with other known specimens, paleontologist David Hu and colleagues have hypothesized that this dinosaur, named Liaoxiraptor, could be an intermediate form between feathered and non-feathered theropods. The discovery suggests that the evolution of feathers was not necessarily linked to the evolution of flight, but may have had other functions first, such as insulation or camouflage.

Which choice best states the main idea of the text?

A) A new dinosaur species with an unusual feather distribution was found by Hu and colleagues.
B) The discovery of Liaoxiraptor sheds new light on the evolution of feathers.
C) An analysis of a Liaoxiraptor fossil confirms the theory that feathers evolved for insulation before flight.
D) Hu and colleagues compared Liaoxiraptor with other theropods to better understand the diversity of feather patterns in dinosaurs.

2. For centuries, the widespread acknowledgment of the involvement of the cerebellum—a dense brain structure in vertebrates—in coordinating motor control in humans has hindered recognition of other possible functions of the structure. Neuroscience research from the last two decades now suggests that the cerebellum regulates emotion and social behavior, and recent research by Ilaria Carta and colleagues has identified a pathway connecting the cerebellum to a center for motivation and reward processing known as the ventral tegmental area (VTA).

Which choice best states the main idea of the text?

A) The recent verification of a pathway between the VTA and the cerebellum confirms the cerebellum's long-suspected role in motor coordination.
B) Recent advances in the field of neuroscience have challenged widely accepted claims about the function of a pathway connecting the VTA and the cerebellum.
C) Recent advances in the field of neuroscience have challenged widely accepted claims about the function of a pathway connecting the VTA and the cerebellum.
D) Recent advances in the field of neuroscience have challenged widely accepted claims about the function of a pathway connecting the VTA and the cerebellum.

3. The following text is adapted from Lewis Carroll's 1889 satirical novel Sylvie and Bruno.

A crowd has gathered outside a room belonging to the Warden, an official who reports to the Lord Chancellor. One man, who was more excited than the rest, flung his hat high into the air, and shouted (as well as I could make out) "Who roar for the Sub-Warden?" Everybody roared, but whether it was for the Sub-Warden, or not, did not clearly appear: some were shouting "Bread!" and some "Taxes!", but no one seemed to know what it was they really wanted. All this I saw from the open window of the Warden's breakfast-saloon, looking across the shoulder of the Lord Chancellor. "What can it all mean?" he kept repeating to himself. "I never heard such shouting before—and at this time of the morning, too! And with such unanimity!"

Based on the text, how does the Lord Chancellor respond to the crowd?

A) He asks about the meaning of the crowd's shouting, even though he claims to know what the crowd wants.

B) He indicates a desire to speak to the crowd, even though the crowd has asked to speak to the Sub-Warden.

C) He expresses sympathy for the crowd's demands, even though the crowd's shouting annoys him.

D) He describes the crowd as being united, even though the crowd clearly appears otherwise.

The next skill within the Information and Ideas domain is Command of Evidence. These questions take two forms: Textual Evidence, where you are asked to identify the piece of evidence from a text that most strongly supports a given claim, and Quantitative Evidence, where you will complete a sentence by using data from a graph or table.

Textual Evidence questions (questions 4, 5, and 6) may ask you to evaluate either a scientific hypothesis or an argument about a literary work. Both of these possibilities are demonstrated in the following practice questions. However, despite this distinction, you can approach all of these questions the same way. The first step is to make sure that you understand the argument or hypothesis being presented in the text. Next, when selecting your answer, remember that you are always looking for the strongest piece of evidence. There may be multiple answers that are related to the argument, but if it's too much of a reach, it's not the strongest evidence.

Quantitative Evidence questions (questions 7, 8, and 9) will feature a table or a graph as the source of evidence, rather than a piece of text. These practice questions feature different kinds of graphs and tables, as Quantitative Evidence will take many forms on the SAT. However, the strategy for approaching these questions is similar to Textual Evidence questions: make sure you understand what the text is asking you, if you are asked to select data to back up an argument. Then, you can evaluate the available evidence. You can use the graph or table to verify whether the presented evidence is true or false, and select the strongest piece of evidence from there.

4. Linguist Deborah Tannen has cautioned against framing contentious issues in terms of two highly competitive perspectives, such as pro versus con. According to Tannen, this debate-driven approach can strip issues of their complexity and, when used in front of an audience, can be less informative than the presentation of multiple perspectives in a noncompetitive format. To test Tannen's hypothesis, students conducted a study in which they showed participants one of three different versions of local news commentary about the same issue. Each version featured a debate between two commentators with opposing views, a panel of three commentators with various views, or a single commentator.

Which finding from the students' study, if true, would most strongly support Tannen's hypothesis?

A) On average, participants perceived commentators in the debate as more knowledgeable about the issue than commentators in the panel.
B) On average, participants perceived commentators in the panel as more knowledgeable about the issue than the single commentator.
C) On average, participants who watched the panel correctly answered more questions about the issue than those who watched the debate or the single commentator did.
D) On average, participants who watched the single commentator correctly answered more questions about the issue than those who watched the debate did.

5. Mosasaurs were large marine reptiles that lived in the Late Cretaceous period, approximately 100 million to 66 million years ago. Celina Suarez, Alberto Pérez-Huerta, and T. Lynn Harrell Jr. examined oxygen-18 isotopes in mosasaur tooth enamel in order to calculate likely mosasaur body temperatures and determined that mosasaurs were endothermic—that is, they used internal metabolic processes to maintain a stable body temperature in a variety of ambient temperatures. Suarez, Pérez-Huerta, and Harrell claim that endothermy would have enabled mosasaurs to include relatively cold polar waters in their range.

Which finding, if true, would most directly support Suarez, Pérez-Huerta, and Harrell's claim?

A) Mosasaurs' likely body temperatures are easier to determine from tooth enamel oxygen-18 isotope data than the body temperatures of nonendothermic Late Cretaceous marine reptiles are.

B) Fossils of both mosasaurs and nonendothermic marine reptiles have been found in roughly equal numbers in regions known to be near the poles during the Late Cretaceous, though in lower concentrations than elsewhere.

C) Several mosasaur fossils have been found in regions known to be near the poles during the Late Cretaceous, while relatively few fossils of nonendothermic marine reptiles have been found in those locations.

D) During the Late Cretaceous, seawater temperatures were likely higher throughout mosasaurs' range, including near the poles, than seawater temperatures at those same latitudes are today.

6. Many archaeologists will tell you that categorizing excavated fragments of pottery by style, period, and what objects they belong to relies not only on standard criteria, but also on instinct developed over years of practice. In a recent study, however, researchers trained a deep-learning computer model on thousands of images of pottery fragments and found that it could categorize them as accurately as a team of expert archaeologists. Some archaeologists have expressed concern that they might be replaced by such computer models, but the researchers claim that outcome is highly unlikely.

Which finding, if true, would most directly support the researchers' claim?

A) In the researchers' study, the model was able to categorize the pottery fragments much more quickly than the archaeologists could.
B) In the researchers' study, neither the model nor the archaeologists were able to accurately categorize all the pottery fragments that were presented.
C) A survey of archaeologists showed that categorizing pottery fragments limits the amount of time they can dedicate to other important tasks that only human experts can do.
D) A survey of archaeologists showed that few of them received dedicated training in how to properly categorize pottery fragments.

Economic Policy Uncertainty in the United Kingdom, 2005–2010

- tax and public spending policy
- trade policy
- general economic policy
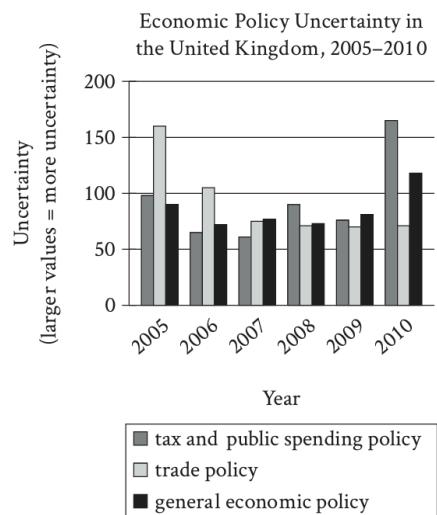
7. High levels of public uncertainty about which economic policies a country will adopt can make planning difficult for businesses, but measures of such uncertainty have not tended to be very detailed. Recently, however, economist Sandile Hlatshwayo analyzed trends in news reports to derive measures not only for general economic policy uncertainty but also for uncertainty related to specific areas of economic policy, like tax or trade policy. One revelation of her work is that a general measure may not fully reflect uncertainty about specific areas of policy, as in the case of the United Kingdom, where general economic policy uncertainty _____

Which choice most effectively uses data from the graph to illustrate the claim?

A) aligned closely with uncertainty about tax and public spending policy in 2005 but differed from uncertainty about tax and public spending policy by a large amount in 2009.

B) was substantially lower than uncertainty about tax and public spending policy each year from 2005 to 2010.

C) reached its highest level between 2005 and 2010 in the same year that uncertainty about trade policy and tax and public spending policy reached their lowest levels.

D) was substantially lower than uncertainty about trade policy in 2005 and substantially higher than uncertainty about trade policy in 2010.

8.

Average Number and Duration of Torpor Bouts
and Arousal Episodes for Alaska Marmots and
Arctic Ground Squirrels, 2008–2011

Feature	Alaska marmots	Arctic ground squirrels
torpor bouts	12	10.5
duration per bout	13.81 days	16.77 days
arousal episodes	11	9.5
duration per episode	21.2 hours	14.2 hours

When hibernating, Alaska marmots and Arctic ground squirrels enter a state called torpor, which minimizes the energy their bodies need to function. Often a hibernating animal will temporarily come out of torpor (called an arousal episode) and its metabolic rate will rise, burning more of the precious energy the animal needs to survive the winter. Alaska marmots hibernate in groups and therefore burn less energy keeping warm during these episodes than they would if they were alone. A researcher hypothesized that because Arctic ground squirrels hibernate alone, they would likely exhibit longer bouts of torpor and shorter arousal episodes than Alaska marmots.

Which choice best describes data from the table that support the researcher's hypothesis?

A) The Alaska marmots' arousal episodes lasted for days, while the Arctic ground squirrels' arousal episodes lasted less than a day.
B) The Alaska marmots and the Arctic ground squirrels both maintained torpor for several consecutive days per bout, on average.
C) The Alaska marmots had shorter torpor bouts and longer arousal episodes than the Arctic ground squirrels did.
D) The Alaska marmots had more torpor bouts than arousal episodes, but their arousal episodes were much shorter than their torpor bouts.

Urban Population of Algeria, France, Japan, and Nigeria
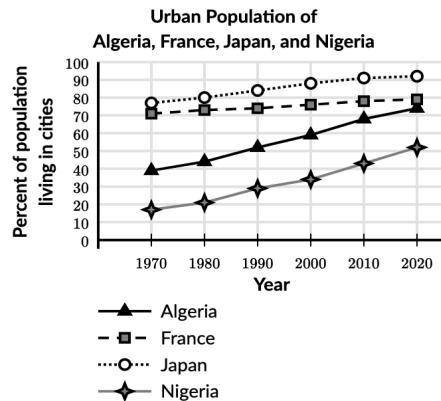
9.

The share of the world's population living in cities has increased dramatically since 1970, but this change has not been uniform. France and Japan, for example, were already heavily urbanized in 1970, with 70% or more of the population living in cities. The main contributors to the world's urbanization since 1970 have been countries like Algeria, whose population went from _____.

Which choice most effectively uses data from the graph to complete the assertion?

A) less than 20% urban in 1970 to more than 50% urban in 2020.
B) less than 40% urban in 1970 to around 90% urban in 2020.
C) around 40% urban in 1970 to more than 70% urban in 2020.
D) around 50% urban in 1970 to around 90% urban in 2020.

The final skill within the Information and Ideas domain is Inferences. Inference questions (questions 10, 11, and 12) will present you with a passage and ask you to select the choice that **most logically completes the text**. As shown in these practice questions, the text may cover a variety of topics, including scientific studies.

To answer these questions, try to first understand the argument being made in the passage. This will help you anticipate what evidence might fill in the blank. Then, you can consider each option in turn, and ask yourself if it strengthens the argument being made. The correct answer should not only logically fit with the rest of the passage, it should make the argument stronger!

10. Ratified by more than 90 countries, the Nagoya Protocol is an international agreement ensuring that Indigenous communities are compensated when their agricultural resources and knowledge of wild plants and animals are utilized by agricultural corporations. However, the protocol has shortcomings. For example, it allows corporations to insist that their agreements with communities to conduct research on the commercial uses of the communities' resources and knowledge remain confidential. Therefore, some Indigenous advocates express concern that the protocol may have the unintended effect of _____

Which choice most logically completes the text?

A) diminishing the monetary reward that corporations might derive from their agreements with Indigenous communities.

B) limiting the research that corporations conduct on the resources of the Indigenous communities with which they have signed agreements.

C) preventing independent observers from determining whether the agreements guarantee equitable compensation for Indigenous communities.

D) discouraging Indigenous communities from learning new methods for harvesting plants and animals from their corporate partners.

11. In documents called judicial opinions, judges explain the reasoning behind their legal rulings, and in those explanations they sometimes cite and discuss historical and contemporary philosophers. Legal scholar and philosopher Anita L. Allen argues that while judges are naturally inclined to mention philosophers whose views align with their own positions, the strongest judicial opinions consider and rebut potential objections; discussing philosophers whose views conflict with judges' views could therefore _____

Which choice most logically completes the text?

A) allow judges to craft judicial opinions without needing to consult philosophical works.
B) help judges improve the arguments they put forward in their judicial opinions.
C) make judicial opinions more comprehensible to readers without legal or philosophical training.
D) bring judicial opinions in line with views that are broadly held among philosophers.

12. In a study of the cognitive abilities of white-faced capuchin monkeys (Cebus imitator), researchers neglected to control for the physical difficulty of the tasks they used to evaluate the monkeys. The cognitive abilities of monkeys given problems requiring little dexterity, such as sliding a panel to retrieve food, were judged by the same criteria as were those of monkeys given physically demanding problems, such as unscrewing a bottle and inserting a straw. The results of the study, therefore, _____

Which choice most logically completes the text?

A) could suggest that there are differences in cognitive ability among the monkeys even though such differences may not actually exist.

B) are useful for identifying tasks that the monkeys lack the cognitive capacity to perform but not for identifying tasks that the monkeys can perform.

C) should not be taken as indicative of the cognitive abilities of any monkey species other than C. imitator.

D) reveal more about the monkeys' cognitive abilities when solving artificial problems than when solving problems encountered in the wild.

Reading Domain 2: Craft and Structure

Now that we've covered our first Reading domain, let's turn to the second: Craft and Structure. Questions in this domain will ask students to determine the meaning of academic words and phrases in context, evaluate texts rhetorically, and make supportable connections between multiple related texts. These questions will cover two skills: Text Structure and Purpose, and Cross-Text Connections.

Specifically, you will be asked to:
- Select the most logical and precise word or phrase based on provided context
- Identify the overall structure or main purpose of a text
- Compare the points of view expressed by authors or two different texts

Questions in this domain account for approximately 28% (13-15 questions) of the Reading/Writing section.

Let's first look at Text Structure and Purpose questions (questions 13 - 20). These questions will ask you to identify either the **main purpose** or **overall structure** of a text. You will need to understand not just the "what" of the text, but use your critical thinking and reasoning skills to understand the "why" behind it — what is the point of the text? What did the author hope to accomplish by writing it? You will also need to think about how the structure of the text, or how it is written, serves that overall purpose. Questions asking about the structure may break the text down into different parts — make sure that each part of the answer accurately describes each part of the text!

The following practice questions demonstrate how you may be asked about both text structure and purpose in a variety of different contexts.

13. For painter Jacob Lawrence, being _____ was an important part of the artistic process. Because he paid close attention to all the details of his Harlem neighborhood, Lawrence's artwork captured nuances in the beauty and vitality of the Black experience during the Harlem Renaissance and the Great Migration.

Which choice completes the text with the most logical and precise word or phrase?

    A) skeptical
    B) observant
    C) critical
    D) confident

14. In Nature Poem (2017), Kumeyaay poet Tommy Pico portrays his _____ the natural world by honoring the centrality of nature within his tribe's traditional beliefs while simultaneously expressing his distaste for being in wilderness settings himself.

Which choice completes the text with the most logical and precise word or phrase?

    A) responsiveness to
    B) ambivalence toward
    C) renunciation of
    D) mastery over

15. In addition to being an accomplished psychologist himself, Francis Cecil Sumner was a _____ increasing the opportunity for Black students to study psychology, helping to found the psychology department at Howard University, a historically Black university, in 1930.

Which choice completes the text with the most logical and precise word or phrase?

 A) proponent of
 B) supplement to
 C) beneficiary of
 D) distraction for

16. In recommending Bao Phi's collection Sông I Sing, a librarian noted that pieces by the spoken-word poet don't lose their _____ nature when printed: the language has the same pleasant musical quality on the page as it does when performed by Phi.

Which choice completes the text with the most logical and precise word or phrase?

   A) Jarring
   B) Scholarly
   C) Melodic
   D) Personal

17. Musician Joni Mitchell, who is also a painter, uses images she creates for her album covers to emphasize ideas expressed in her music. For the cover of her album Turbulent Indigo (1994), Mitchell painted a striking self-portrait that closely resembles Vincent van Gogh's Self-Portrait with Bandaged Ear (1889). The image calls attention to the album's title song, in which Mitchell sings about the legacy of the postimpressionist painter. In that song, Mitchell also hints that she feels a strong artistic connection to Van Gogh—an idea that is reinforced by her imagery on the cover.

Which choice best describes the overall structure of the text?

A) It presents a claim about Mitchell, then gives an example supporting that claim.
B) It discusses Van Gogh's influence on Mitchell, then considers Mitchell's influence on other artists.
C) It describes a similarity between two artists, then notes a difference between them.
D) It describes the songs on Turbulent Indigo, then explains how they relate to the album's cover

18. The following text is from Charlotte Brontë's 1847 novel Jane Eyre.

Jane works as a governess at Thornfield Hall. I went on with my day's business tranquilly; but ever and anon vague suggestions kept wandering across my brain of reasons why I should quit Thornfield; and I kept involuntarily framing advertisements and pondering conjectures about new situations: these thoughts I did not think to check; they might germinate and bear fruit if they could.

Which choice best states the main purpose of the text?

A) To convey a contrast between Jane's outward calmness and internal restlessness
B) To emphasize Jane's loyalty to the people she works for at Thornfield Hall
C) To demonstrate that Jane finds her situation both challenging and deeply fulfilling
D) To describe Jane's determination to secure employment outside of Thornfield Hall

19.The following text is from the 1923 poem "Black Finger" by Angelina Weld Grimké, a Black American writer.

A cypress is a type of evergreen tree. I have just seen a most beautiful thing, Slim and still, Against a gold, gold sky, A straight black cypress, Sensitive, Exquisite, A black finger Pointing upwards. Why, beautiful still finger, are you black? And why are you pointing upwards?

Which choice best describes the overall structure of the text?

A) The speaker assesses a natural phenomenon, then questions the accuracy of her assessment.

B) The speaker describes a distinctive sight in nature, then ponders what meaning to attribute to that sight.

C) The speaker presents an outdoor scene, then considers a human behavior occurring within that scene.

D) The speaker examines her surroundings, then speculates about their influence on her emotional state.

20. The following text is from the 1924 poem "Cycle" by D'Arcy McNickle, who was a citizen of the Confederated Salish and Kootenai Tribes.

There shall be new roads wending, A new beating of the drum— Men's eyes shall have fresh seeing, Grey lives reprise their span— But under the new sun's being, Completing what night began, There'll be the same backs bending, The same sad feet shall drum— When this night finds its ending And day shall have come.....

Which choice best states the main purpose of the text?

A) To consider how the repetitiveness inherent in human life can be both rewarding and challenging
B) To question whether activities completed at one time of day are more memorable than those completed at another time of day
C) To refute the idea that joy is a more commonly experienced emotion than sadness is
D) To demonstrate how the experiences of individuals relate to the experiences of their communities

The second skill within the Craft and Structure domain is Cross-Text Connections. These questions (questions 21 - 24) will present you with two short texts and then ask you to **compare the points of view** of the two authors. These questions will always focus on point of view, so keep this in mind as you read the passages. Ask yourself if the points of view agree, disagree, or build off of each other. This will help you understand the relationship between the two, making it easier to select the correct answer. Make sure that your answer is grounded in what is directly written in the text!

The following four questions show the kinds of texts you may be presented with on Cross-Text Connections questions.

21. Text 1:

Astronomer Mark Holland and colleagues examined four white dwarfs—small, dense remnants of past stars—in order to determine the composition of exoplanets that used to orbit those stars. Studying wavelengths of light in the white dwarf atmospheres, the team reported that traces of elements such as lithium and sodium support the presence of exoplanets with continental crusts similar to Earth's.

Text 2:

Past studies of white dwarf atmospheres have concluded that certain exoplanets had continental crusts. Geologist Keith Putirka and astronomer Siyi Xu argue that those studies unduly emphasize atmospheric traces of lithium and other individual elements as signifiers of the types of rock found on Earth. The studies don't adequately account for different minerals made up of various ratios of those elements, and the possibility of rock types not found on Earth that contain those minerals.

Based on the texts, how would Putirka and Xu (Text 2) most likely characterize the conclusion presented in Text 1?

A) As unexpected, because it was widely believed at the time that white dwarf exoplanets lack continental crusts

B) As premature, because researchers have only just begun trying to determine what kinds of crusts white dwarf exoplanets had

C) As questionable, because it rests on an incomplete consideration of potential sources of the elements detected in white dwarf atmospheres

D) As puzzling, because it's unusual to successfully detect lithium and sodium when analyzing wavelengths of light in white dwarf atmospheres

22. Text 1:

Ecologists have long wondered how thousands of microscopic phytoplankton species can live together near ocean surfaces competing for the same resources. According to conventional wisdom, one species should emerge after outcompeting the rest. So why do so many species remain? Ecologists' many efforts to explain this phenomenon still haven't uncovered a satisfactory explanation.

Text 2:

Ecologist Michael Behrenfeld and colleagues have connected phytoplankton's diversity to their microscopic size. Because these organisms are so tiny, they are spaced relatively far apart from each other in ocean water and, moreover, experience that water as a relatively dense substance. This in turn makes it hard for them to move around and interact with one another. Therefore, says Behrenfeld's team, direct competition among phytoplankton probably happens much less than previously thought.

Based on the texts, how would Behrenfeld and colleagues (Text 2) most likely respond to the "conventional wisdom" discussed in Text 1?

> A) By arguing that it is based on a misconception about phytoplankton species competing with one another
> B) By asserting that it fails to recognize that routine replenishment of ocean nutrients prevents competition between phytoplankton species
> C) By suggesting that their own findings help clarify how phytoplankton species are able to compete with larger organisms
> D) By recommending that more ecologists focus their research on how competition among phytoplankton species is increased with water density

23. <u>Text 1</u>:

What factors influence the abundance of species in a given ecological community? Some theorists have argued that historical diversity is a major driver of how diverse an ecological community eventually becomes: differences in community diversity across otherwise similar habitats, in this view, are strongly affected by the number of species living in those habitats at earlier times.

<u>Text 2</u>:

In 2010, a group of researchers including biologist Carla Cáceres created artificial pools in a New York forest. They stocked some pools with a diverse mix of zooplankton species and others with a single zooplankton species and allowed the pool communities to develop naturally thereafter. Over the course of four years, Cáceres and colleagues periodically measured the species diversity of the pools, finding—contrary to their expectations—that by the end of the study there was little to no difference in the pools' species diversity.

Based on the texts, how would Cáceres and colleagues (Text 2) most likely describe the view of the theorists presented in Text 1?

  A) It is largely correct, but it requires a minor refinement in light of the research team's results.
  B) It is largely correct, but it requires a minor refinement in light of the research team's results.
  C) It may seem plausible, but it is not supported by the research team's findings.
  D) It probably holds true only in conditions like those in the research team's study.

24. Text 1:

The ancient Greek poet Homer is widely considered the author of two epic poems, the Iliad and the Odyssey, which recount the events of the Trojan War and its aftermath. However, some scholars have argued that Homer was not a single individual, but a collective name for a tradition of oral poets who composed and performed the epics over several centuries. These scholars cite the lack of reliable historical information about the life and identity of Homer, as well as the apparent contradictions in the plot and style of the epics. According to this theory, the Iliad and the Odyssey are the products of a fluid and evolving oral culture, not of a fixed and coherent literary vision.

Text 2:

A recent study by a team of researchers used statistical methods to analyze the linguistic patterns and vocabulary of the Iliad and the Odyssey, comparing them with other ancient Greek texts. The study found that the two epics are remarkably consistent in their use of language, and that they are significantly different from other texts attributed to the same period. The study concluded that the Iliad and the Odyssey are most likely the work of a single author, or at least of a very close group of collaborators.

Based on the texts, how would the author of Text 2 most likely respond to the assertion in the underlined portion of Text 1?

A) By noting that the argument does not account for the influence of later editors on modern versions of the epics

B) By challenging the argument with the findings from the linguistic analysis of the epics, which support the theory of a single author or a close group of collaborators

C) By critiquing the argument for overlooking the historical evidence that Homer was recognized and celebrated as a real poet.

D) By confirming that the differences between the epics and other texts attributed to the same period support the theory that the epics reflect an evolving oral tradition.

Writing

Now that we've covered all the skills you will need to demonstrate in the Reading section, let's take a look at the writing portion. Writing questions also fall into two domains: Expression of Ideas and Standard English Conventions.

Writing domain 1: Expression of Ideas

Questions in our first Writing domain will ask you to use your revision skills and knowledge to improve the effectiveness of written expression and accomplish specific rhetorical goals. They cover the following skills: Rhetorical Synthesis and Transitions.

These questions will require you to:
- Read a series of bulleted notes on a topic and use the most relevant information from the notes to accomplish a particular goal
- Identify the most logical word or phrase to connect information/ideas within a given passage

This domain accounts for approximately 26% (11-15 questions) of the Reading/Writing section.

Our first skill within the Expression of Ideas domain is Rhetorical Synthesis. These questions (questions 25 - 30) will present you with a series of bulleted notes and ask you to **select the most relevant information to accomplish a particular goal**. These questions include a lot of information, but the goal is simple and will be clearly outlined in the question prompt. Make sure you keep your focus on the question itself rather than all of the bulleted information — much of this information will be unnecessary for answering the question! Once you understand the stated goal, test out the options to identify which one successfully accomplishes the goal.

The presented notes may cover a variety of different topics, as demonstrated in the following questions.

25. While researching a topic, a student has taken the following notes:
  • The Philadelphia and Lancaster Turnpike was a road built between 1792 and 1794.
  • It was the first private turnpike in the United States.
  • It connected the cities of Philadelphia and Lancaster in the state of Pennsylvania.
  • It was sixty-two miles long.

The student wants to emphasize the distance covered by the Philadelphia and Lancaster Turnpike. Which choice most effectively uses relevant information from the notes to accomplish this goal?

  A) The sixty-two-mile-long Philadelphia and Lancaster Turnpike connected the Pennsylvania cities of Philadelphia and Lancaster.
  B) The Philadelphia and Lancaster Turnpike was the first private turnpike in the United States.
  C) The Philadelphia and Lancaster Turnpike, which connected two Pennsylvania cities, was built between 1792 and 1794.
  D) A historic Pennsylvania road, the Philadelphia and Lancaster Turnpike was completed in 1794.

26. While researching a topic, a student has taken the following notes:
   • The Seikan Tunnel is a rail tunnel in Japan.
   • It connects the island of Honshu to the island of Hokkaido.
   • It is roughly 33 miles long.
   • The Channel Tunnel is a rail tunnel in Europe.
   • It connects Folkestone, England, to Coquelles, France.
   • It is about 31 miles long.

The student wants to compare the lengths of the two rail tunnels. Which choice most effectively uses relevant information from the notes to accomplish this goal?

   A) Some of the world's rail tunnels, including one tunnel that extends from Folkestone, England, to Coquelles, France, are longer than 30 miles.
   B) The Seikan Tunnel is roughly 33 miles long, while the slightly shorter Channel Tunnel is about 31 miles long.
   C) The Seikan Tunnel, which is roughly 33 miles long, connects the Japanese islands of Honshu and Hokkaido.
   D) Both the Seikan Tunnel, which is located in Japan, and the Channel Tunnel, which is located in Europe, are examples of rail tunnels.

27. While researching a topic, a student has taken the following notes:

    • In the midst of the US Civil War, Susie Taylor escaped slavery and fled to Union-army-occupied St. Simons Island off the Georgia coast.
    • She began working for an all-Black army regiment as a nurse and teacher.
    • In 1902, she published a book about the time she spent with the regiment. • Her book was the only Civil War memoir to be published by a Black woman.
    • It is still available to readers in print and online.

The student wants to emphasize the uniqueness of Taylor's accomplishment. Which choice most effectively uses relevant information from the notes to accomplish this goal?

    A) Taylor fled to St. Simons Island, which was then occupied by the Union army, for whom she began working.
    B) After escaping slavery, Taylor began working for an all-Black army regiment as a nurse and teacher.
    C) The book Taylor wrote about the time she spent with the regiment is still available to readers in print and online.
    D) Taylor was the only Black woman to publish a Civil War memoir.

28. While researching a topic, a student has taken the following notes:

- The magnificent frigatebird (fregata magnificens) is a species of seabird that feeds mainly on fish, tuna, squid, and other small sea animals.
- It is unusual among seabirds in that it doesn't dive into the water for prey.
- One way it acquires food is by using its hook-tipped bill to snatch prey from the surface of the water.
- Another way it acquires food is by taking it from weaker birds by force.
- This behavior is known as kleptoparasitism.

The student wants to emphasize a similarity between the two ways a magnificent frigatebird acquires food. Which choice most effectively uses relevant information from the notes to accomplish this goal?

A) A magnificent frigatebird never dives into the water, instead using its hook-tipped bill to snatch prey from the surface.

B) Neither of a magnificent frigatebird's two ways of acquiring food requires the bird to dive into the water.

C) Of the magnificent frigatebird's two ways of acquiring food, only one is known as kleptoparasitism.

D) In addition to snatching prey from the water with its hook-tipped bill, a magnificent frigatebird takes food from other birds by force.

29. While researching a topic, a student has taken the following notes:

 • Chemical leavening agents cause carbon dioxide to be released within a liquid batter, making the batter rise as it bakes.
 • Baking soda and baking powder are chemical leavening agents.
 • Baking soda is pure sodium bicarbonate.
 • To produce carbon dioxide, baking soda needs to be mixed with liquid and an acidic ingredient such as honey.
 • Baking powder is a mixture of sodium bicarbonate and an acid.
 • To produce carbon dioxide, baking powder needs to be mixed with liquid but not with an acidic ingredient.

The student wants to emphasize a difference between baking soda and baking powder. Which choice most effectively uses relevant information from the notes to accomplish this goal?

A) To make batters rise, bakers use chemical leavening agents such as baking soda and baking powder.

B) Baking soda and baking powder are chemical leavening agents that, when mixed with other ingredients, cause carbon dioxide to be released within a batter.

C) Baking soda is pure sodium bicarbonate, and honey is a type of acidic ingredient.

D) To produce carbon dioxide within a liquid batter, baking soda needs to be mixed with an acidic ingredient, whereas baking powder does not.

30. While researching a topic, a student has taken the following notes:
- Maika'i Tubbs is a Native Hawaiian sculptor and installation artist.
- His work has been shown in the United States, Canada, Japan, and Germany, among other places.
- Many of his sculptures feature discarded objects.
- His work Erasure (2008) includes discarded audiocassette tapes and magnets.
- His work Home Grown (2009) includes discarded pushpins, plastic plates and forks, and wood.

The student wants to emphasize a similarity between the two works. Which choice most effectively uses relevant information from the notes to accomplish this goal?

A) Erasure (2008) uses discarded objects such as audiocassette tapes and magnets; Home Grown (2009), however, includes pushpins, plastic plates and forks, and wood.
B) Like many of Tubbs's sculptures, both Erasure and Home Grown include discarded objects: Erasure uses audiocassette tapes, and Home Grown uses plastic forks.
C) Tubbs's work, which often features discarded objects, has been shown both within the United States and abroad.
D) Tubbs's work, which often features discarded objects, has been shown both within the United States and abroad.

Now, let's look at the second skill within Expression of Ideas: Transitions. Transitions questions (questions 31 - 36) will ask you to **complete the text with the most logical transition**.

When answering transitions questions, the first thing to do is identify the relationship between the two ideas being connected. Do they agree, disagree, or build off each other? Are they organized in order of time? Or do they represent a cause and effect relationship? Identifying this relationship is key to selecting the correct transition. There are many possible transition words/phrases, so remember that there is more than one way to accomplish the same goal.

The following practice questions ask you to complete different kinds of texts with both transition words and phrases, as you may be required to do when taking your test.

31. Organisms have evolved a number of surprising adaptations to ensure their survival in adverse conditions. Tadpole shrimp (Triops longicaudatus) embryos, _____ can pause development for over ten years during extended periods of drought.

Which choice completes the text with the most logical transition?

  A) in contrast,
  B) for example,
  C) meanwhile,
  D) consequently,

32. Etched into Peru's Nazca Desert are line drawings so large that they can only be fully seen from high above. Archaeologists have known of the lines since the 1920s, when a researcher spotted some from a nearby foothill, and they have been studying the markings ever since. _____ archaeologists' efforts are aided by drones that capture high-resolution aerial photographs of the lines.

Which choice completes the text with the most logical transition?

    A) Currently,
    B) In comparison,
    C) Still,
    D) However,

33. During a 2021 launch, Rocket Labs' Electron rocket experienced an unexpected failure: its second-stage booster shut down suddenly after ignition. _____ instead of downplaying the incident, Rocket Labs' CEO publicly acknowledged what happened and apologized for the loss of the rocket's payload, which had consisted of two satellites.

Which choice completes the text with the most logical transition?

    A) Afterward,
    B) Additionally,
    C) Indeed,
    D) Similarly

34. Archaeologist Sue Brunning explains why the seventh-century ship burial site at Sutton Hoo in England was likely the tomb of a king. First, the gold artifacts inside the ship suggest that the person buried with them was a wealthy and respected leader. _____ the massive effort required to bury the ship would likely only have been undertaken for a king.

Which choice completes the text with the most logical transition?

A) Instead,
B) Still,
C) Specifically,
D) Second,

35. Researchers Helena Mihaljević-Brandt, Lucía Santamaría, and Marco Tullney report that while mathematicians may have traditionally worked alone, evidence points to a shift in the opposite direction. _____ mathematicians are choosing to collaborate with their peers—a trend illustrated by a rise in the number of mathematics publications credited to multiple authors.

Which choice completes the text with the most logical transition?

    A) Similarly,
    B) For this reason,
    C) Furthermore,
    D) Increasingly,

36. Iraqi artist Nazik Al-Malaika, celebrated as the first Arabic poet to write in free verse, didn't reject traditional forms entirely; her poem "Elegy for a Woman of No Importance" consists of two ten-line stanzas and a standard number of syllables. Even in this superficially traditional work, _____ Al-Malaika was breaking new ground by memorializing an anonymous woman rather than a famous man.

Which choice completes the text with the most logical transition?

    A) in fact,
    B) though,
    C) therefore,
    D) moreover,

Writing domain 2: Standard English Conventions

We have now arrived at the final domain within the Writing section: Standard English Conventions. Questions in this domain will ask you to use your editing knowledge and skills to make texts conform to conventions of Standard English sentence structure, usage, and punctuation. Your knowledge of subject-verb agreement, pronoun-antecedent agreement, verb forms, subject-modifier placement, and plural and possessive nouns will be tested across two skills: Boundaries and Form, Structure, and Sense.

Specifically, you will be asked to:
- Link clauses using punctuation or conjunctions
- Complete the blank in a short passage in a way that conforms to the conventions of Standard English

This domain accounts for approximately 20% (8-12 questions) of the Reading/Writing section.

It is important to note that, unlike other sections of the digital SAT, both Boundaries and Form, Structure, and Sense questions will use the same question stem: **Which choice completes the text so that it conforms to the conventions of Standard English?** However, these questions will differ in the kinds of grammatical knowledge assessed.

First, let's discuss Boundaries (questions 37 - 43). These questions will ask you about how phrases, clauses, and sentences are linked together with correct punctuation. You will need to know when to use, and when not to use, different punctuation marks such as commas, semicolons, colons, periods, question marks, dashes, and parentheses.

The following practice questions demonstrate the variety of punctuation marks you may be tested on, and the different contexts you may see them in.

37. The Alvarez theory, developed in 1980 by physicist Luis Walter Alvarez and his geologist son Walter Alvarez, maintained that the secondary effects of an asteroid impact caused many dinosaurs and other animals to die _____ it left unexplored the question of whether unrelated volcanic activity might have also contributed to the mass extinctions.

Which choice completes the text so that it conforms to the conventions of Standard English?

    A) out but
    B) out, but
    C) out
    D) out,

38. Lucía Michel of the University of Chile observed that alkaline soils contain an insoluble form of iron that blueberry plants cannot absorb, thus inhibiting blueberry growth. If these plants were grown in alkaline soil alongside grasses that aid in iron solubilization, _____ Michel was determined to find out.

Which choice completes the text so that it conforms to the conventions of Standard English?

      A) could the blueberries thrive.
      B) the blueberries could thrive.
      C) the blueberries could thrive?
      D) could the blueberries thrive?

39. Joshua Hinson, director of the language revitalization program of the Chickasaw Nation in Oklahoma, helped produce the world's first Indigenous-language instructional app, Chickasaw _____ Chickasaw TV, in 2010; and a Rosetta Stone language course in Chickasaw, in 2015.

Which choice completes the text so that it conforms to the conventions of Standard English?

A) Basic; in 2009, an online television network;
B) Basic; in 2009, an online television network,
C) Basic, in 2009; an online television network,
D) Basic, in 2009, an online television network,

40. In her two major series "Memory Test" and "Autobiography," painter Howardena Pindell explored themes _____ healing, self-discovery, and memory by cutting and sewing back together pieces of canvas and inserting personal artifacts, such as postcards, into some of the paintings.

Which choice completes the text so that it conforms to the conventions of Standard English?

A) of
B) of,
C) of—
D) of:

41. Sociologist Alton Okinaka sits on the review board tasked with adding new sites to the Hawaiʻi Register of Historic Places, which includes Piʻilanihale Heiau and the ʻŌpaekaʻa Road Bridge. Okinaka doesn't make such decisions _____ all historical designations must be approved by a group of nine other experts from the fields of architecture, archaeology, history, and Hawaiian culture.

Which choice completes the text so that it conforms to the conventions of Standard English?

    A) single-handedly, however;
    B) single-handedly; however,
    C) single-handedly, however,
    D) single-handedly however

42. A study led by scientist Rebecca Kirby at the University of Wisconsin–Madison found that black bears that eat human food before hibernation have increased levels of a rare carbon isotope, _____ due to the higher 13C levels in corn and cane sugar. Bears with these elevated levels were also found to have much shorter hibernation periods on average.

Which choice completes the text so that it conforms to the conventions of Standard English?

A) carbon-13, (13C)
B) carbon-13 (13C)
C) carbon-13, (13C),
D) carbon-13 (13C),

43. According to Naomi Nakayama of the University of Edinburgh, the reason seeds from a dying dandelion appear to float in the air while _____ is that their porous plumes enhance drag, allowing the seeds to stay airborne long enough for the wind to disperse them throughout the surrounding area.

Which choice completes the text so that it conforms to the conventions of Standard English?

A) falling,
B) falling:
C) falling;
D) Falling

Finally, let's discuss our last Writing skill: Form, Structure, and Sense.

These questions focus on several different grammatical conventions — subject-verb agreement, pronoun-antecedent agreement, verb forms, subject-modifier placement, and plural and possessive nouns — all of which are covered in the following practice questions (questions 44 - 50).

When answering these questions, it is helpful to first identify what's missing in the blank. It may be a verb phrase, in which case you will need to avoid errors in verb forms and subject-verb agreement. It may instead be a noun phrase, which means you'll need to pay attention to plural and possessive nouns. Plugging in each option and eliminating those that create grammatical errors is a great way to arrive at the correct answer!

44. Even though bats prefer very sweet nectar, the plants that attract them have evolved to produce nectar that is only moderately sweet. A recent study _____ why: making sugar is energy-intensive, and it is more advantageous for plants to make a large amount of low-sugar nectar than a small amount of high-sugar nectar.

Which choice completes the text so that it conforms to the conventions of Standard English?

    A) explains
    B) explaining
    C) having explained
    D) to explain

45. It is hard to live in Antarctica. The cold, dry environment provides the continent's soil-dwelling microbes few nutrients, little water, and almost no sunlight. In a 2017 study of these organisms, microbiologist Belinda Ferrari reported that _____ able to survive on a diet of atmospheric gases found in the soil.

Which choice completes the text so that it conforms to the conventions of Standard English?

    A) it is
    B) this is
    C) either is
    D) they are

46. While many spiders use webs to catch their food, others capture prey using hunting or burrowing techniques. Spiders from the family Ctenizidae, often called trapdoor spiders, _____ their burrows with doors, using their silk for hinges.

Which choice completes the text so that it conforms to the conventions of Standard English?

    A) cover
    B) are covering
    C) will have covered
    D) had covered

47. Rabinal Achí is a precolonial Maya dance drama performed annually in Rabinal, a town in the Guatemalan highlands. Based on events that occurred when Rabinal was a city-state ruled by a king, _____ had once been an ally of the king but was later captured while leading an invading force against him.

Which choice completes the text so that it conforms to the conventions of Standard English?

A) Rabinal Achí tells the story of K'iche' Achí, a military leader who
B) K'iche' Achí, the military leader in the story of Rabinal Achí,
C) there was a military leader, K'iche' Achí, who in Rabinal Achí
D) the military leader whose story is told in Rabinal Achí, K'iche' Achí,

48. African American Percy Julian was a scientist and entrepreneur whose work helped people around the world to see. Named in 1999 as one of the greatest achievements by a US chemist in the past hundred years, _____ led to the first mass-produced treatment for glaucoma.
Which choice completes the text so that it conforms to the conventions of Standard English?

     A) Julian synthesized the alkaloid physostigmine in 1935; it
     B) in 1935 Julian synthesized the alkaloid physostigmine, which
     C) Julian's 1935 synthesis of the alkaloid physostigmine
     D) the alkaloid physostigmine was synthesized by Julian in 1935 and

49. Slam poet Elizabeth Acevedo's debut novel The Poet X, winner of the 2018 National Book Award for Young People's Literature, is composed of _____ protagonist, fifteen-year-old Xiomara Batista.

Which choice completes the text so that it conforms to the conventions of Standard English?

    A) poem's putatively written by the novel's
    B) poem's putatively written by the novels'
    C) poems putatively written by the novel's
    D) poems putatively written by the novels'

50. In his groundbreaking book Bengali Harlem and the Lost Histories of South Asian America, Vivek Bald uses newspaper articles, census records, ships' logs, and memoirs to tell the _____ who made New York City their home in the early twentieth century.

Which choice completes the text so that it conforms to the conventions of Standard English?

A) story's of the South Asian immigrants

B) story's of the South Asian immigrants'

C) stories of the South Asian immigrants

D) stories' of the South Asian immigrant's

Math
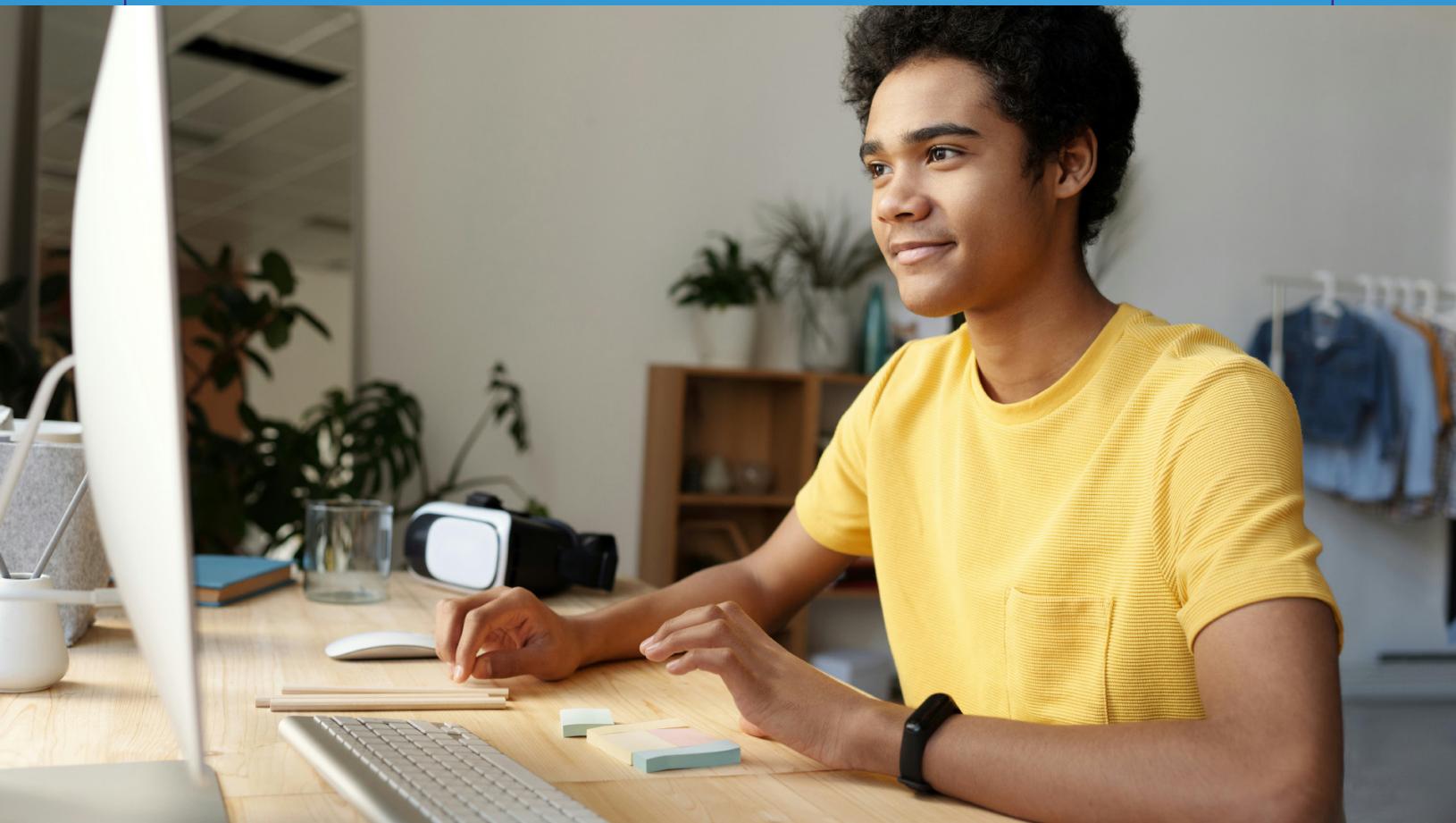
Math

Now that you are well prepared for every kind of question you'll see on the Reading and Writing sections, let's turn to the second half of the digital SAT: the Math portion. Questions in the Math section can either be multiple choice or student produced response questions (SPRs), where students will be required to input their own answer into a designated field. Approximately 30% of math problems on the digital SAT will be set in verbal context. And importantly, unlike the paper version of the test, calculator use is allowed throughout the entire Math section. However, just because you can use a calculator for every question, doesn't mean you should: oftentimes, questions can be solved more efficiently without it.

The Math section contains four domains: **Algebra**, **Advanced Math**, **Problem Solving and Data Analysis**, and **Geometry and Trigonometry**. As with Reading/Writing, each domain will test you on a number of specific skills, and we will look at each domain and skill in turn.

Math domain 1: Algebra

Questions in the first domain, algebra, will ask students to analyze, fluently solve, and create linear equations and inequalities as well as analyze and solve systems of equations.

Specifically, you will see questions covering the following skill/knowledge points:
- Linear equations in one variable
- Linear equations in two variables
- Linear functions
- Systems of two linear equations in two variables
- Linear inequalities

This domain accounts for approximately 35% (13-14 questions) of the Math section. Because this is such a large percentage, mastering your Algebra skills is critical to earning your target score.

The following practice questions (questions 1 - 12) highlight the variety of forms Algebra questions can take, covering each of the listed skill/knowledge points with multiple choice questions, student-produced response questions, and questions set in verbal context. As you will see below, a large proportion of Algebra questions involve linear graphs and equations, so make sure your skills in this area are strong!

1. If $6x + 10 = 24$, what is the value of $3x + 5$?

2. $2(3x+1) - (9-2x) = 25$

What value of x satisfies the equation above?

3. If $\frac{1}{2} + \frac{2}{5}s = s - \frac{3}{4}$, what is the value of s?

A) $\frac{3}{4}$

B) $\frac{25}{12}$

C) $-\frac{25}{12}$

D) $-\frac{3}{4}$

4. Figure A and figure B are both regular polygons. The sum of the perimeter of figure A and the perimeter of figure B is 63 inches. The equation $3x + 6y = 63$ represents this situation, where x is the number of sides of figure A and y is the number of sides of figure B.

Which statement is the best interpretation of 6 in this context?

A) Each side of figure B has a length of 6 inches.
B) The number of sides of figure B is 6.
C) Each side of figure A has a length of 6 inches.
D) The number of sides of figure A is 6.

5. The y-intercept of the graph of $y = -6x - 32$ in the xy-plane is $(0, y)$. What is the value of y ?

6. If f $(x) = x + 7$ and g$(x) = 7x$, what is the value of $4f(2) - g(2)$?

      A) −5
      B) 1
      C) 22
      D) 28

7.
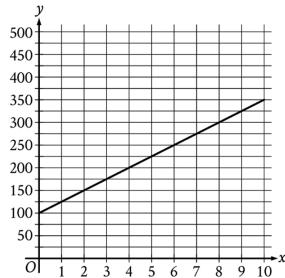
The graph of the function f, where y = f (x), models the total cost *y*, in dollars, for a certain video game system and *x* games. What is the best interpretation of the slope of the graph in this context?

A) Each game costs $25.
B) The video game system costs $100.
C) The video game system costs $25.
D) Each game costs $100.

8. Store A sells raspberries for $5.50 per pint and blackberries for $3.00 per pint. Store B sells raspberries for $6.50 per pint and blackberries for $8.00 per pint. A certain purchase of raspberries and blackberries would cost $37.00 at store A or $66.00 at store B. How many pints of blackberries are in this purchase?

     A) 12
     B) 5
     C) 8
     D) 4

9. $y = x{-}2$
      $3x + 5y = 30$

If (x, y) is a solution to the system of equations above, what is the value of x?

A) 3
B) 5
C) 8
D) 15

10. $ax - 3y = 21$
     $bx - 3y = 11$

The system of equations above has no solutions. If a and b are positive constants, what is the value of a/b?

11. $16 < -4x$

Which of the following best describes the solutions to the inequality shown?

A) $x < -4$

B) $x > -4$

C) $x < -\frac{1}{4}$

D) $x > -\frac{1}{4}$

12. $y < -4x + 4$

Which point (x, y) is a solution to the given inequality in the xy-plane?

A) $(2, -1)$
B) $(2, 1)$
C) $(0, 5)$
D) $(-4, 0)$

Math domain 2: Advanced Math

Ready for a challenge? Our second Math domain, Advanced Math, focuses on the math skills needed to pursue further study in the STEM fields (science, technology, engineering, and math). This area measures the knowledge that is crucial for progressing to more advanced math courses, such as an understanding of absolute value, quadratic, exponential, polynomial, rational, radical, and other nonlinear equations.

Questions in this domain will cover these skill/knowledge points:
- Equivalent expressions
- Nonlinear equations in one variable
- Systems of equations in two variables
- Nonlinear functions

Like the Algebra domain, Advanced Math questions account for approximately 35% (13-15 questions) of the Math section, and will have a large impact on your overall Math score. The following practice questions (questions 13 - 24) cover every skill you will need to demonstrate in this domain.

13. Which expression is equivalent to $\dfrac{4}{4x-5} - \dfrac{1}{x+1}$?

A) $\dfrac{9}{(x+1)(4x-5)}$

B) $\dfrac{3}{3x-6}$

C) $\dfrac{1}{(x+1)(4x-5)}$

D) $- \dfrac{1}{(x+1)(4x-5)}$

14. Which expression is equivalent to $(7x^3 + 7x) - (6x^3 - 3x)$?

A) $x^3 + 10x$

B) $-13x^3 + 10x$

C) $-13x^3 + 4x$

D) $x^3 + 4x$

15. Which expression is equivalent to $6x^8y^2 + 12x^2$?

    A) $6x^2y^2(2x^6)$
    B) $6x^2y^2(x^4)$
    C) $6x^2y^2(x^6+2)$
    D) $6x^2y^2(x^4+2)$

16. In the *xy*-plane, a line with equation $2y = 4.5$ intersects a parabola at exactly one point. If the parabola has equation $y = -4x^2 + bx$, where b is a positive constant, what is the value of b?

17. $(x - 1)2 = -4$

How many distinct real solutions does the given equation have?

    A) Exactly one
    B) Exactly two
    C) Infinitely many
    D) Zero

18. $x(x+2) = 8$

Which of the following lists all solutions to the quadratic equation above?

   A) 8 and 6

   B) 4 and -2

   C) -4 and 2

   D) $\sqrt{6}$

19. $f(x) = (x - 10)^2 - 49$

At what values of x does the graph of the function intersect the x-axis?

   A) $x=17, x = 3$
   B) $x = 17, x = -3$
   C) $x = -17, x = 3$
   D) $f(x)$ does not intersect the x axis

20. $-27x + 54y = 9x^2 - 19$
    $3x - 6y = -5$

If (x_1, y_1) and (x_2, y_2) are distinct solutions to the system of equations shown, what is the sum of the y values y_1 and y_2?

21. $g(x) = x^2 + 55$

What is the minimum value of the given function?

   A) 3,025
   B) 110
   C) 55
   D) 0

22. The function h is defined by $h(x) = a^x + b$, where a and b are positive constants. The graph of $y = h(x)$ in the *xy*-plane passes through the points $(0, 10)$ and $(-2, \frac{325}{36})$.

What is the value of *ab*?

A) $\frac{1}{4}$

B) $\frac{1}{2}$

C) 54

D) 60

23. For the function f, f (0) = 86, and for each increase in x by 1, the value of f (x) decreases by 80%. What is the value of f (2)?

x	$h(x)$
-3	7
-2	4
1	0
3	-3
4	3

24. The table above shows the value of the function h at certain values of x. What is the value of h(h(3))?

A) -3
B) -2
C) 4
D) 7

Math domain 3: Problem Solving and Data Analysis

Our third Math domain, Problem Solving and Data Analysis, measures your ability to apply quantitative reasoning about ratios, rates, and proportional relationships, to understand and apply unit rate, and to analyze and interpret one- and two-variable data. These questions aim to capture skills needed to be quantitatively literate and to have a command of the math that you will find in college, career training, and everyday life.

Questions in this domain will encompass the following seven knowledge/skill points:
- Ratios, rates, and proportional relationships,
- Percentages,
- One-variable data (distributions and measures of center and spread)
- Two-variable data (models and scatterplots)
- Probability and conditional probability
- Inference from sample statistics and margin of error
- Evaluating statistical claims (from observational studies and experiments)

Despite covering many different skills, this domain accounts for only 15% (5-7 questions) of the Math section. Therefore, your performance on Algebra and Advanced Math will have a greater impact on your score. However, it is still important to practice and feel confident with all the domains. The following practice questions (questions 25 - 37) cover each of the seven skills you will be tested on in Problem Solving and Data Analysis.

25. The density of a certain type of wood is 353 kilograms per cubic meter. A sample of this type of wood is in the shape of a cube and has a mass of 345 kilograms. To the nearest hundredth of a meter, what is the length of one edge of this sample?

    A) 0.98
    B) 0.99
    C) 1.01
    D) 1.02

26. The 36-inch tires on a pickup truck have a circumference of 9.42 feet. To the nearest whole rotation, how many rotations must the tires make for the truck to travel 2 miles in straight line? (1 mile = 5280 feet)

27. In a group, 40% of the items are red. Of all the red items in the group, 30% also have stripes. What percentage of the items in the group are red and have stripes?

    A) 10%
    B) 12%
    C) 70%
    D) 75%

Name	Test 1	Test 2	Test 3	Test 4	Test 5
Amara	98	95	94	93	95
Lance	96	95	100	88	96

28.

Amara and Lance are taking the same class. The table above shows their test scores for the class. Which of the following statements about their test scores is true?

A) Amara has a greater range of test scores than Lance does.
B) Amara has a greater standard deviation in her test scores than Lance does.
C) Amara and Lance have the same mean test score.
D) Amara and Lance have the same median test score.

29. The minimum value of a data set consisting of 15 positive integers is 29. A new data set consisting of 16 positive integers is created by including 22 in the original data set. Which of the following measures must be 7 greater for the new data set than for the original data set?

    A) The mean
    B) The median
    C) The range
    D) The standard deviation

The scatterplot shows the relationship between two variables, x and y. A line of best fit for the data is also shown.
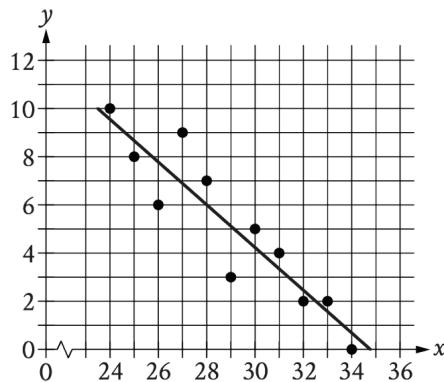
At $x = 32$, which of the following is closest to the y-value predicted by the line of best fit?

30.

A) 0.5
B) 1.5
C) 2.4
D) 3.3

Number of quarters, $f(x)$

Trial number, (x)
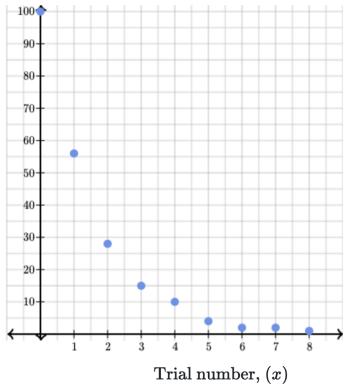
31.

A box of 100 quarters is emptied onto a table. The coins that land heads up are returned to the box, and the process is repeated until there is 1 coin left in the box. The scatter plot depicts the number of quarters in the box after each trial. Which of the following functions best describes the relationship shown?

A) $f(x) = 5.60(0.996)^x$

B) $f(x) = 99.62(5.560)^x$

C) $f(x) = 0.56(99.62)^x$

D) $f(x) = 99.62(0.56)^x$

Grade	Uses pencil only	Uses pen only	Uses both pencil and pen	Total
9th grade	10	32	46	88
10th grade	7	41	41	89
11th grade	9	36	63	108
12th grade	15	11	60	86
Total	41	120	210	351

32.

A teacher surveyed a school's students on what type of writing utensil they used most in their math and science classes. The results, categorized by grade and type of utensil, are shown. Based on the table, which of the following statements is true?

A) 7.9% of 10th graders use pen only.
B) 25% of 12th graders use pencil only.
C) 30% of those who prefer both pencil and pen are in 11th grade.
D) 60% of those who prefer only pencil are in 11th grade.

Language	Native speakers	Non-native speakers	Total
Mandarin Chinese	848	178	1026
Spanish	415		
Hindi	400	200	600
English	335		
Arabic	485	145	625
Total	2483	1237	3570

33.

The table shows the most commonly spoken five languages in the world by native and non-native speakers, in millions, according to the 2013 SIL Ethnologue. If the relative frequency of Spanish non-native speakers to all non-native speakers was 4.8%, approximately how many non-native Spanish speakers, in millions, were there in 2013?

A) 20
B) 59
C) 119
D) 594

34. In a poll of 14,697 randomly selected adults in the United States, those polled spent an average of $95 per day in November of last year, as compared with $91 per day in November two years ago. The estimates had a margin of error of $4 at the 95% confidence level. Which of the following is a reasonable claim to make based on this sample?

A) All adults in the United States spent between $91 and $99 daily last November.
B) 95% of adults in the United States spent between $91 and $99 daily last November
C) It is plausible that average daily spending of adults in the United States remained the same in November of last year as it was in November two years ago.
D) Between 91% and 99% of adults in the United States spent $4 more daily last November than in November two years ago.

35. In School District X, 6.9% of the 29 students in Ms. Walker's sixth-grade class identify as Asian. The average sixth-grade class size in the school district is 2. If the students in Ms. Walker's class are representative of students in the school district's sixth-grade classes and there are 112 sixth-grade classes in the district, which of the following best estimates the number of sixth-grade students in the school district who do not identify as Asian?

    A) 3,248
    B) 3,024
    C) 1,007
    D) 224

36. A study was conducted to test a feed additive's ability to increase the milk production of dairy cows. 100 dairy cows between 2 and 3 years of age were selected at random. Half of the cows were randomly assigned to eat feed containing the additive, and the other half ate feed without the additive. The results showed that the cows that ate the additive produced significantly more milk than the cows that did not. Based on this information, which of the following is an appropriate conclusion?

A) The feed additive will improve the milk production of any dairy cow that eats it.
B) The feed additive is more effective at increasing the milk production of 2- to 3-year old dairy cows than dairy cows in other age groups.
C) The feed additive is likely to increase the milk production of dairy cows between 2 and 3 years old.
D) The feed additive is likely to have no effect on the milk production of dairy cows that are not between 2 and 3 years old.

37. A study was conducted on an elementary school's extracurricular programs. The study divided the students into two groups, those who attended after school electives and those who did not. The results of the study showed that students who attended after school electives were more likely to attend summer camp than students who did not attend these electives. Based on the information provided, which of the following is an appropriate conclusion?

A) Attending after school electives is a requirement for attending summer camp.
B) After school elective attendance is the strongest predictor of whether a student will attend summer camp.
C) There is a positive association between after school electives attendance and summer camp attendance.
D) If a student stops attending after school electives, then they will not attend summer camp.

Math domain 4: Geometry and Trigonometry

We have now arrived at our final domain in the Math section — and our final domain of the digital SAT! Questions in this domain, Geometry and Trigonometry, will test you on the following skill/knowledge points:

- Calculating area and volume
- Solving for unknown values using congruent angles, similar lines, and intersections of lines
- Right angles and trigonometry
- Circle equations

Like Problem Solving and Data Analysis, this domain accounts for just 15% (5-7 questions) of the Math section, but is still important to practice. The following questions (questions 38 - 50) cover each of the skill points you will be tested on.
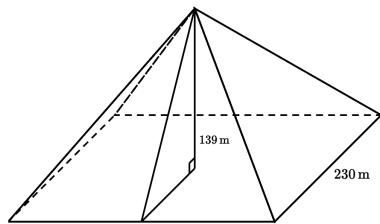
38.
The pyramid at Khufu is one of the Great Pyramids of Giza. The right pyramid has a square base with base lengths of 230 meters, as shown. The original vertical height of the pyramid is believed to have been approximately 146.5 meters. Due to erosion, the height is now approximately 139 meters. If the base area of the pyramid did not change, what is the difference between the volume of the pyramid now and the original volume of the pyramid in cubic meters?

A) 575m³
B) 132,250m³
C) 2,451,033m³
D) 2,583,283m³

39. V = A*t*

A confectioner is applying a sugar coating to some spherical candies. The given equation approximates V, the volume of coating in cubic millimeters, needed to create a *t*-millimeter thick coating on a candy with a surface area of A square millimeters. If 20π cubic millimeters of coating is needed to create a 0.2 -millimeter thick coat on a spherical candy, what is the uncoated candy's radius in millimeters?

(The formula for the surface area, A, of a sphere with radius *r* is A = $4\pi r^2$)

40. If θ = 240°, what is the value of θ in radians?

    A) $2\pi/3$
   B) $7\pi/6$
    C) $4\pi/3$
    D) $3\pi/2$

41. Two nearby trees are perpendicular to the ground, which is flat. One of these trees is 10 feet tall and has a shadow that is 5 feet long. At the same time, the shadow of the other tree is 2 feet long. How tall, in feet, is the other tree?

    A) 3
    B) 4
    C) 8
    D) 27
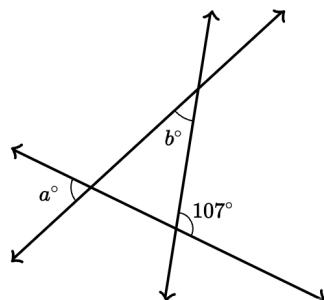
42.

In the diagram shown, three lines intersect to form a triangle. What is the value of $a + b$?

43.

What is the value of x in the figure?
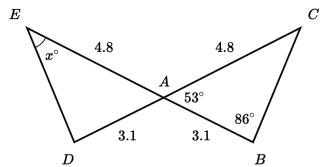
44. The length of a rectangle's diagonal is 5 $\sqrt{17}$, and the length of the rectangle's shorter side is 5. What is the length of the rectangle's longer side?

    A) $\sqrt{17}$
    B) 20
    C) 15 $\sqrt{2}$
   D) 400

Typical Safety Cone
**Dimensions, in inches (in)**

2 in

s in

28 in

12 in
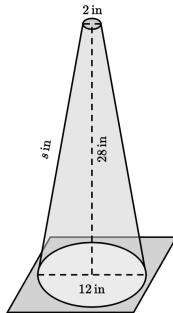
45.

The figure gives the dimensions, in inches, of a typical safety cone. What is the length of the slant height s, in inches?

(Round your answer to the nearest tenth of an inch.)

46.
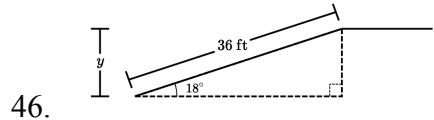
Jarvis is surveying his property to plan an addition. He determines that his driveway has an angle of inclination of 18 degrees above the horizontal as seen in the diagram. He measures the length of the driveway to be 36 feet (ft) long. What is the difference in height, y, in feet, from the top of the driveway to the bottom? (Round your answer to the nearest foot.)
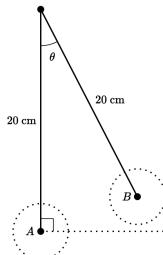
47.

A pendulum is formed by a string 20 centimeters (cm) long attached to the center of a disk as shown. It swings such that the measure of the angle between the string at its lowest point, A, and the string at its highest point, B, has a cosine of 0.9. What is the difference in the heights of A and B in centimeters?

48. A circle has center O, and points A and B lie on the circle. The measure of arc AB is 45° and the length of arc AB is 3 inches. What is the circumference, in inches, of the circle?

A) 3
B) 6
C) 9
D) 24

49. A circle in the *xy*-plane has the equation $(x-4)^2 + (y+1)^2 = 16$. Which of the following points does NOT lie inside the circle?

    A) (7, -3)
    B) (4, -1)
    C) (2, 2)
    D) (0,0)

50. The diameter of a circle graphed in the *xy*-plane has endpoints at (-23, 15) and (1, -55). Which of the following is an equation of the circle?

    A) $(x+23)^2 + (y-15)^2 = 1369$
    B) $(x+23)^2 + (y-15)^2 = 5476$
    C) $(x+11)^2 + (y+20)^2 = 1369$
    D) $(x+11)^2 + (y+20)^2 = 5476$

ANSWER KEY: READING/WRITING

1. B
Domain: **Information and Ideas** Skill: **Central ideas and details**
2. C
Domain: **Information and Ideas** Skill: **Central ideas and details**
3. D
Domain: **Information and Ideas** Skill: **Central ideas and details**
4. C
Domain: **Information and Ideas** Skill: **Command of textual evidence**
5. C
Domain: **Information and Ideas** Skill: **Command of textual evidence**
6. C
Domain: **Information and Ideas** Skill: **Command of textual evidence**
7. D
Domain: **Information and Ideas** Skill: **Command of quantitative evidence**
8. A
Domain: **Information and Ideas** Skill: **Command of quantitative evidence**
9. C
Domain: **Information and Ideas** Skill: **Command of quantitative evidence**
10. C
Domain: **Information and Ideas** Skill: **Inferences**
11. B
Domain: **Information and Ideas** Skill: **Inferences**
12. A
Domain: **Information and Ideas** Skill: **Inferences**
13. B
Domain: **Craft and Structure** Skill: **Words in Context**
14. B
Domain: **Craft and Structure** Skill: **Words in Context**
15. A
Domain: **Craft and Structure** Skill: **Words in Context**
16. C
Domain: **Craft and Structure** Skill: **Words in Context**
17. A
Domain: **Craft and Structure** Skill: **Text structure and purpose**
18. A
Domain: **Craft and Structure** Skill: **Text structure and purpose**
19. B
Domain: **Craft and Structure** Skill: **Text structure and purpose**

20. A
Domain: **Craft and Structure** Skill: **Text structure and purpose**
21. C
Domain: **Craft and Structure** Skill: **Cross-text connections**
22. A
Domain: **Craft and Structure** Skill: **Cross-text connections**
23. C
Domain: **Craft and Structure** Skill: **Cross-text connections**
24. B
Domain: **Craft and Structure** Skill: **Cross-text connections**
25. A
Domain: **Expression of Ideas** Skill: **Rhetorical synthesis**
26. B
Domain: **Expression of Ideas** Skill: **Rhetorical synthesis**
27. D
Domain: **Expression of Ideas** Skill: **Rhetorical synthesis**
28. B
Domain: **Expression of Ideas** Skill: **Rhetorical synthesis**
29. D
Domain: **Expression of Ideas** Skill: **Rhetorical synthesis**
30. B
Domain: **Expression of Ideas** Skill: **Rhetorical synthesis**
31. B
Domain: **Expression of Ideas** Skill: **Transitions**
32. A
Domain: **Expression of Ideas** Skill: **Transitions**
33. A
Domain: **Expression of Ideas** Skill: **Transitions**
34. D
Domain: **Expression of Ideas** Skill: **Transitions**
35. D
Domain: **Expression of Ideas** Skill: **Transitions**
36. B
Domain: **Expression of Ideas** Skill: **Transitions**
37. B
Domain: **Standard English Conventions** Skill: **Boundaries**
38. D
Domain: **Standard English Conventions** Skill: **Boundaries**
39. C

Domain: **Standard English Conventions** Skill: **Boundaries**

40. A

Domain: **Standard English Conventions** Skill: **Boundaries**

41. A

Domain: **Standard English Conventions** Skill: **Boundaries**

42. D

Domain: **Standard English Conventions** Skill: **Boundaries**

43. D

Domain: **Standard English Conventions** Skill: **Boundaries**

44. A

Domain: **Standard English Conventions** Skill: **Form, structure, and sense**

45. D

Domain: **Standard English Conventions** Skill: **Form, structure, and sense**

46. A

Domain: **Standard English Conventions** Skill: **Form, structure, and sense**

47. A

Domain: **Standard English Conventions** Skill: **Form, structure, and sense**

48. C

Domain: **Standard English Conventions** Skill: **Form, structure, and sense**

49. D

Domain: **Standard English Conventions** Skill: **Form, structure, and sense**

50. C

Domain: **Standard English Conventions** Skill: **Form, structure, and sense**

ANSWER KEY: MATH

1. 12

Domain: Algebra Skill: **Linear equations in one variable**

2. 4

Domain: **Algebra** Skill: **Linear equations in one variable**

2. B

Domain: Algebra Skill: **Linear equations in one variable**

4. A

Domain: **Algebra** Skill: **Linear equations in two variables**

5. -31

Domain: **Algebra** Skill: **Linear equations in two variables**

6. C

Domain: **Algebra** Skill: **Linear functions**

7. A

Domain: **Algebra** Skill: **Linear functions**

8. B

Domain: **Algebra** Skill: **Systems of two linear equations in two variables**

9. B

Domain: **Algebra** Skill: **Systems of two linear equations in two variables**

10. 1

Domain: **Algebra** Skill: **Systems of two linear equations in two variables**

11. A

Domain: **Algebra** Skill: **Linear inequalities in one or two variables**

12. D

Domain: **Algebra** Skill: **Linear inequalities in one or two variables**

13. A

Domain: **Advanced Math** Skill: **Equivalent expressions**

14. A

Domain: **Advanced Math** Skill: **Equivalent expressions**

15. C

Domain: **Advanced Math** Skill: **Equivalent expressions**

16. 6

Domain: **Advanced Math** Skill: **Nonlinear equations in one variable/Systems of equations in two variables**

17. D

Domain: **Advanced Math** Skill: **Nonlinear equations in one variable/Systems of equations in two variables**

18. C

Domain: **Advanced Math** Skill: **Nonlinear equations in one variable/Systems of equations in two variables**

19. A

Domain: **Advanced Math** Skill: **Nonlinear equations in one variable/Systems of equations in two variables**

20. 5/3

Domain: **Advanced Math** Skill: **Nonlinear equations in one variable/Systems of equations in two variables**

21. C

Domain: **Advanced Math** Skill: **Nonlinear functions**

22. 54

Domain: **Advanced Math** Skill: **Nonlinear functions**

23. 3.44, 86/25

Domain: **Advanced Math** Skill: **Nonlinear functions**

24. D

Domain: **Advanced Math** Skill: **Nonlinear functions**

25. B

Domain: **Problem Solving and Data Analysis** Skill: **Ratios, rates, proportional relationships, and units**

26. 1121

Domain: **Problem Solving and Data Analysis** Skill: **Ratios, rates, proportional relationships, and units**

27. B

Domain: **Problem Solving and Data Analysis** Skill: **Percentages**

28. C

Domain: **Problem Solving and Data Analysis** Skill: **One-variable data: distributions and measures of center and spread**

29. C

Domain: **Problem Solving and Data Analysis** Skill: **One-variable data: distributions and measures of center and spread**

30. C

Domain: **Problem Solving and Data Analysis** Skill: **Two-variable data: models and scatterplots**

31. D

Domain: **Problem Solving and Data Analysis** Skill: **Two-variable data: models and scatterplots**

32. C

Domain: **Problem Solving and Data Analysis** Skill: **Probability and conditional probability**

33. B

Domain: **Problem Solving and Data Analysis** Skill: **Probability and conditional probability**

34. C

Domain: **Problem Solving and Data Analysis** Skill: **Inference from sample statistics and margin of error**

35. B

Domain: **Problem Solving and Data Analysis** Skill: **Inference from sample statistics and margin of error**

36. C

Domain: **Problem Solving and Data Analysis** Skill: **Evaluating statistical claims: observational studies and experiments**

37. C

Domain: **Problem Solving and Data Analysis** Skill: **Evaluating statistical claims: observational studies and experiments**

38. B

Domain: **Geometry and Trigonometry** Skill: **Area and volume formulas**

39. r = 5

Domain: **Geometry and Trigonometry** Skill: **Area and volume formulas**

40. C

Domain: **Geometry and Trigonometry** Skill: **Area and volume formulas**

41. B

Domain: **Geometry and Trigonometry** Skill: **Lines, angles, and triangles**

42. 107

Domain: **Geometry and Trigonometry** Skill: **Lines, angles, and triangles**

43. 41 degrees

Domain: **Geometry and Trigonometry** Skill: **Lines, angles, and triangles**

44. B

Domain: **Geometry and Trigonometry** Skill: **Right triangles and trigonometry**

45. 28.4

Domain: **Geometry and Trigonometry** Skill: **Right triangles and trigonometry**

46. 11

Domain: **Geometry and Trigonometry** Skill: **Right triangles and trigonometry**

47. 2cm

Domain: **Geometry and Trigonometry** Skill: **Right triangles and trigonometry**

48. 24

Domain: **Geometry and Trigonometry** Skill: **Circles**

49. D

Domain: **Geometry and Trigonometry** Skill: **Circles**

50. C

Domain: **Geometry and Trigonometry** Skill: **Circles**

Sources:
- https://satsuite.collegeboard.org/sat/practice-preparation/practice-tests/linear
- https://www.khanacademy.org/test-prep/digital-sat
- https://satsuite.collegeboard.org/media/pdf/digital-sat-sample-questions.pdf
- https://satsuite.collegeboard.org/sat/whats-on-the-test